



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/037,697	11/09/2001	Roy C. Krohn	KRO 0128 PUS	7566

7590 06/25/2004

Michael S. Brodbine  
Brooks & Kushman P.C.  
1000 Town Center, 22nd Floor  
Southfield, MI 48075-1351

EXAMINER
----------

BERMAN, SUSAN W

ART UNIT	PAPER NUMBER
----------	--------------

1711

DATE MAILED: 06/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/037,697	KROHN ET AL.	
	Examiner	Art Unit	
	Susan W Berman	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 12 April 2004.
- 2a) ☐ This action is **FINAL**.      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-64 and 72-79 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 64,73-79 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-20 and 72 is/are rejected.
- 7) ☒ Claim(s) 21-63 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

***Response to Amendment***

The objection to the specification with respect to original claim 20 is hereby withdrawn in view of the amendment of claim 20 to correspond to the specification.

The objection to claim 3 is withdrawn because claim 3 is cancelled. New independent claim 72 and dependent claims 4-16 are allowable because the recited method employs an EL composition comprising an oligomer selected from the group set forth in the claim in combination with isobornyl acrylate, a photoinitiator and a phosphor. Compositions requiring isobornyl acrylate and a phosphor are not taught in the prior art of record.

***Response to Arguments***

Applicant argues that the composition disclosed by WO '005 contains a volatile solvent and thus is not included in the instantly claimed method step "c) 1)". This argument is not persuasive because the solvent in the composition employed by WO '005 is evaporated before radiation curing. Thus the applied composition to be radiation cured does not contain a volatile solvent when irradiated with UV light and no volatile solvent is incorporated in the electroluminescent layer after curing, thus meeting the requirements in the instant claim language.

Applicant argues that deSouza discloses an unsaturated polyester mixed with volatile solvents in Example 1. This argument is not persuasive because Example 1 of deSouza is not relied upon in the rejection of record. Example 1 does not employ UV curing and thus the Example 1 composition comprising organic solvents is not representative of the UV curable composition taught by deSouza. Example 6 discloses UV curable compositions and UV curing. It is believed that the teaching of DeSouza that the preferred resin is UV curable polyester resin in column 12, lines 44-48, refers to the disclosed acrylate compounds as the "UB curable polyester resin" or to well-known UV curable polyesters

Art Unit: 1711

containing UV curable groups such as maleate, fumarate or acrylate that may be combined with reactive diluents such as styrene or plasticizers such as dioctyl phthalate.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by WO 96/22005 (see Etzbach et al (5,922,481)). WO '005 discloses an electroluminescent article containing at least one layer obtained by thermal or radiation-induced crosslinking of a composition containing a crosslinkable charge-transporting compound and a crosslinkable fluorescent compound. See US '481: column 1, lines 26-48, column 2, lines 43-67, column 3, lines 1-43, column 14, lines 44-54, and the Example. The composition employed by WO '005 contains a solvent that is evaporated before radiation curing. The applied composition to be radiation cured does not contain a volatile solvent when irradiated with UV light and no volatile solvent is incorporated in the electroluminescent layer after curing, thus meeting the requirements in the instant claim language.

Claim 1, 2 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by deSouza (4,684,353). deSouza discloses a flexible EL film laminate comprising a layer of resin containing EL phosphor. Example 6 discloses a UV curable resin comprising an acrylate monomer, a phosphor and photoinitiator that is UV cured. No solvents are present in the composition. DeSouza teaches that the preferred resin is UV curable polyester resin (column 12, lines 44-48). See Figures 1 and 2, the method described in columns 3-5, and column 12, line 49, to column 13, line 19.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 2 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over deSouza (4,684,353). deSouza discloses a flexible EL film laminate comprising a layer of resin containing EL phosphor. Example 6 discloses a UV curable resin and UV curing. deSouza teaches that the preferred resin is UV curable polyester resin (column 12, lines 44-48). See Figures 1 and 2, the method described in columns 3-5, and column 12, line 49, to column 13, line 19. deSouza discloses a transparent front electrode and a silver (or other metal) back electrode. The transparent conductive composition disclosed by applicant can contain silver powder (page 39). It would have been obvious to one skilled in the art at the time of the invention to employ a transparent electrode as both conductive electrodes in the EL lamp taught by deSouza. One of ordinary skill in the art at the time of the invention would have been motivated by a reasonable expectation of success in providing a useful EL lamp.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Art Unit: 1711

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1, 2, 4-20 and 72 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-10 and 12-25 of copending Application No. 10/089,960 in view of WO '005. Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons. Claims 10 and 12-19 of US '960 recite a method comprising coating a substrate with an EL composition and UV curing the composition to provide an active layer in an electroluminescent device. WO '005, as discussed herein above, discloses a method for making EL arrangements including conductive layers and a EL active layer. The comprising language of the method claims of S.N. '960 encompasses the method steps of providing conductive layers in addition to the UV cured EL layer set forth in the instant claims. It would have been obvious to one skilled in the art at the time of the invention to employ the method for coating a substrate with an EL composition and UV curing the composition to provide an active layer in an electroluminescent device recited in the claims of SN '960 in combination with the steps of providing conductive layers and, optionally, other layers as taught by WO '005.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

#### *Allowable Subject Matter*

Claims 21-63 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. With respect to claims 21-39, the prior art does not teach or suggest the method of claim 2 wherein the conductive layer is made by UV curing an opaque conductive composition as set forth in claim 21 into a transparent conductive layer. With respect to claim 40-47, the cited prior art does not teach a method employing a UV curable dielectric composition. With respect to claim 48-62, the cited

Art Unit: 1711

prior art does not teach a method employing a UV curable conductive composition. With respect to claim 63, the cited prior art does not teach a method employing a UV curable clear coat composition.

Claims 64 and 73-79 are allowed. The prior art of record and otherwise known to the examiner does not teach or suggest a method comprising each of the steps set forth in claim 64 wherein each composition employed is cured by exposure to UV light.

### *Conclusion*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Susan W Berman  
Primary Examiner  
Art Unit 1711